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THE ROLE OF LONELINESS AND RESILIENCE IN PSYCHOSOCIAL HEALTH FOR
VICTIMS OF CYBERBULLYING IN A COLLEGE POPULATION

A Dissertation
presented in partial fulfillment of requirements
for the degree of Doctor of Philosophy
in the Department of Psychology
The University of Mississippi

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ABSTRACT

Research has shown that bullying, especially chronic levels of bullying, during childhood may lead to negative outcomes, such as anxiety and depression in adulthood. Cyberbullying, or bullying through electronic media, is a recent phenomenon that has sparked interest in examining bullying with young adults, as early research suggests cyberbullying is becoming increasingly problematic within the young adult population and has the potential for negative psychosocial outcomes.

Data indicate a relationship between loneliness and negative psychosocial outcomes, suggesting loneliness may be a key factor in the relationship between stress resulting from cyberbullying victimization and psychological distress. Moreover, although cyberbullying may lead to negative psychosocial outcomes, some individuals appear to be more resilient than others to this stress; demonstrating better than expected outcomes in the face of cyberbullying victimization. Resilience has been suggested to be a “buffer” against negative psychosocial outcomes, and therefore may be important to the relationship among cyberbullying, loneliness, and psychosocial health. The purpose of the present study was to examine the relationships among cyberbullying, loneliness, resilience, and psychosocial health in college students.

Participants were 543 undergraduate students, ranging in age from 18-30 plus years old, from a public university in the southeastern United States. Participants completed the study online through Qualtrics, a web based survey system. Participants completed a demographic questionnaire, the Cyberbullying Scale (CBS), UCLA Loneliness Scale (Version 3), the Brief

Resilience Scale (BRS), and the Depression Anxiety and Stress Scale – 21 (DASS-21). It was hypothesized that the experience of cyberbullying (X) would predict negative psychosocial outcomes (Y) as mediated through loneliness (M). Additionally, given the rationale that resilience potentially provides protective factor against loneliness, it was hypothesized that resilience (W) would moderate the relationship between loneliness (M) and negative psychosocial outcomes (Y). A moderated mediation analysis was conducted using Model 14 in the PROCESS procedure for SPSS (Hayes, 2013). Contrary to predictions, the moderated mediation effect was not significant. However, as expected, loneliness was found to mediate the relationship between cyberbullying and negative psychosocial outcomes. Implications of findings are discussed.

DEDICATION

This dissertation is dedicated to my family – Dad, Mom, sister Ashton, and husband Dustin.

Without their unending love, support, encouragement, and prayers, none of this would have been possible and I am forever grateful.

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INTRODUCTION

Bullying is a common experience for many children and adolescents. Generally defined, bullying is the repeated exposure to negative actions by others. “These negative actions can take the form of physical contact, verbal abuse, or making faces and rude gestures. Bullying entails an imbalance in strength between bullies and victim, which experts call an asymmetric power relationship” (Olweus, 2001 p.24). Spreading rumors and excluding the victim from a group are also common forms of bullying. Research suggests as many as 50-75% of children/adolescents have been bullying victims (Raskauskas & Stoltz, 2007; Li, 2007). Statistics also indicate that as many as 19.3% of children and adolescents have engaged in bullying behavior (Nansel et al., 2001).

Research reveals that bullying can lead to many adverse consequences for both bullies and victims. Children and adolescents who have been victims of bullying report increased symptoms of depression (Ybarra, 2004); higher levels of stress (Newman, Holden, and Delville, 2005); and may engage in delinquent behavior such as skipping school, assaulting a peer, cheating on a test, or drinking liquor (Hinduja & Patchin, 2007). Additionally, children and adolescents who have bullied others report poor emotional bonds with caregivers, higher levels of substance abuse, and more delinquent behavior when compared with their non-bully peers (Ybarra & Mitchell, 2004).

Traditional bullying generally brings to mind elementary schoolyard threats, intimidation, and possibly fighting. However, with the advent of electronic media technology, many youth are

using the internet and cell phones as a means to threaten, harass, and embarrass peers. Electronic or cyberbullying has been defined as “willful and repeated harm inflicted through the medium of electronic text” (Patchin & Hinduja, 2006). Online bullies often use text messaging, email, social media websites (such as Facebook or YouTube), defaming websites, and online “slam books” in order to harass or embarrass their victims. Research suggests as many as 30-50% of children and adolescents have been victims of cyberbullying (Patchin & Hinduja, 2006, Li, 2007). As with traditional bullying, research has shown many negative consequences for cyberbullying victims and perpetrators.

While many victims of bullying experience psychological distress, there is variability in the degree to which victims may suffer these consequences. Research has suggested that loneliness may play a mediating role between various stressors and psychological distress, such as depression and anxiety. For example, Aanes, Mittemark, and Hetland (2010) investigated the relationship between interpersonal stress and depressive symptoms, and the role of loneliness in that relationship. Data revealed that 75% of the total effect was mediated by loneliness. It is possible that loneliness may play a key role in the relationship between cyberbullying victimization and psychological distress.

While being the target of aggression is certainly an unpleasant experience and can often be traumatic for an individual, some appear to be more resilient than others. Bonanno (2004) described resilience as “the ability to maintain a stable equilibrium”, therefore minimizing psychological distress that would negatively impact functioning. Research has suggested that resilience is instrumental in coping with psychological stressors in a variety of situations, such as

severe physical injury (Quale & Shanke, 2010; Catalano et al., 2011) and victimization (Sapouna & Wolke, 2013).

The purpose of this work is to examine cyberbullying and its relationship to psychosocial health. Following a discussion of traditional forms of bullying and victimization, the epidemiology of this problem behavior and its impact on victim and perpetrator, cyberbullying is examined. Additionally, the impact of loneliness on psychosocial health associated with cyber victimization, as well as resilience, is discussed.

Traditional Bullying

Bullying is a relatively new area of research with definitions varying across researchers. Olweus (1977), one of the first researchers to examine bullying, defined bullying as repeated “violence or oppression”, either mental and/or physical, by one or more peers against another. He has since expanded this definition, stating that bullying occurs when one or more people repeatedly expose another to negative actions, making it difficult for the victim to defend him/herself due to a power imbalance (Olweus 1995).

Rivers and Smith (1994) identified bullying behaviors as a subset of aggression that relies on an imbalance of power between the bully and victim and are repetitive in nature. Bullying behaviors included direct physical aggression, direct verbal aggression, and indirect aggression. Bullying was defined by Slee (1994) as a type of aggression that was repetitive, deliberately hurtful, and involved an imbalance of strength. Hunter, Boyle, and Warden (2007) suggested that bullying is a type of peer-victimization that adds features of intent to harm and imbalance of power.

In an attempt to establish a central definition of bullying, Greene (2000) compiled a list of features common to definitions of bullying. These features include: a) the bully intends to cause harm and/or inflict fear in the victim, b) there is repeated aggression toward the victim, c) bullying is not provoked by the victim with verbal or physical aggression, d) behavior occurs in familiar social groups, and e) there is a real or perceived difference of power that the bully has over the victim. Bullying behavior can be described as being either overt (e.g. direct physical aggression, physical or verbal threats) or covert (e.g. spreading rumors, excluding the victim from a social group or activity, or social rejection).

It has been difficult to determine an accurate overall prevalence rate of traditional types of bullying due to differences across researchers with respect to the manner in which it has been defined and measured. Despite this issue, studies suggest bullying to be a significant problem. Solberg and Olweus (2003) sought to determine the estimated prevalence of school bullying using a large sample of Norwegian students in grades 5 through 9. Data used in their study were taken from a larger project conducted by Olweus in 1997. Students were administered the revised version of the Olweus Bully/Victim Questionnaire as well as measures looking at social disintegration in class/peer group, global negative self-evaluations, depressive tendencies, general aggression, and antisocial behavior. Analyses revealed 10% of the students were victims of bullying, 6.5% bullied others, and 1.6% were “bully-victims” (students who were both bullying victims and perpetrators). The authors suggested that for a student to be classified as a bully or bullying victim for prevalence estimation purposes, the most useful cut off point for frequency is “2 or 3 times a month”. This figure was based on their findings indicating victims (based on this cut off) showed much higher rates of social disintegration, negative self evaluation, and depression when compared to non victims. Bullies who were identified using

these cut offs were shown to have much higher scores on measures of general aggression and antisocial behavior when compared to non bullies.

Rivers and Smith (1994) examined prevalence, age and sex differences for various types of bullying (direct physical, direct verbal, and indirect). A sample of over 7,000 primary and secondary school children in Great Britain completed questionnaires about bullying behavior during the previous school term. Analysis revealed that for primary school students 29% of boys and 24% of girls reported being victims of direct physical bullying, 41% of boys and 39% of girls were victims of direct verbal bullying, and 18% of boys and 25% of girls were victims of indirect bullying (e.g. spreading rumors, excluding victim from group, etc.). For secondary school students, 11% of boys and 5% of girls were victims of direct physical bullying, 23% of boys and 24% of girls were victims of direct verbal bullying, and 8% of boys and 10% of girls were victims of indirect bullying. It was suggested that indirect bullying may be more effective for girls rather than boys due to the tendency of girls to have smaller, closer knit social groups which would result in typical indirect bullying strategies being more hurtful and “effective”.

Olafsen and Viemerö (2000) surveyed a large group of 10-12 year old 5th and 6th grade students about experiences with bullying (victimization and perpetration) and coping with stressful encounters. Analyses revealed 17% of students surveyed indicated being victims of bullying, 4.1% indicated being bullies, and 2.2% indicated being bully/victims. Significantly more boys than girls endorsed being a bully, but there was no gender difference for being a victim. The authors suggested that research should focus on bullies and bully/victims as findings indicate personal characteristics are not sufficient to predict victimization.

Perren and Hornung (2005) sought to determine the prevalence of bully victimization and perpetration along with the prevalence and co-occurrence of criminal victimization and violent delinquency behaviors among adolescents in Switzerland. A large sample of 7th and 9th grade students completed a questionnaire assessing bullying involvement (perpetrator or victim, what kind of bullying, and frequency), criminal victimization, violent delinquent behavior, acceptance by peers, and family support. Analyses revealed 4% of participants were victims of bullying, 6% were bullies, and 3% were bully/victims. Additionally, data indicated a positive association between bullying (victimization and perpetration), and criminal victimization and violent delinquency. It was suggested that poor family relationships are a possible risk factor for being a bully, whereas poor social relationships with peers are a possible risk factor for being a victim of bullying.

Consequences of Traditional Bullying

Bullying has often been thought of as just another part of childhood that kids will “outgrow.” Unfortunately, research suggests there are severe and long lasting consequences to bullying involvement that may persist into adulthood.

Slee (1994) explored the association between anxiety and childhood bullying. A large sample of fourth-seventh grade children in Australia were administered a questionnaire about bullying tendencies, and several questions about their experiences with bullying. Analyses revealed 9.7% of the participants reported being victims of “serious” bullying (i.e. once or more times per week). A significant association between being a victim of serious bullying and social evaluation anxiety, social avoidance, and distress was observed. However, anxiety problems were not seen in bullying perpetrators. The authors suggested that peer acceptance is important

to children/adolescents, and fear of negative evaluation (victimization) by peers may lead to significant anxiety.

Newman, Holden, and Delville (2005) explored some of the long-term consequences resulting from bullying in adolescence. A large sample of undergraduate students completed questionnaires about their experiences with bullying before and during high school. Measures of symptoms of stress and trauma were also administered. Analyses revealed that before high school, 33% of the students were bullied occasionally and 26% were bullied frequently. During high school, 25% were bullied occasionally and 9% were bullied frequently. Data indicated that frequency, duration, perceived isolation, and in some cases gender, all contributed to long term psychological impact of bullying. Generally, people who were bullied frequently and perceived more isolation reported significantly more stress symptoms. Relative to boys, girls tended to report more stress symptoms, but there were no gender differences for effects of isolation. It was suggested that chronic bullying victims are at an elevated risk for psychological problems. It was also suggested that timing of victimization could be pertinent, as those who were victimized before, but not during high school had “recovered”.

Tritt and Duncan (1997) surveyed a sample of undergraduate men and women in order to determine the impact of childhood bullying on adult loneliness and self esteem. The participants completed questionnaires about childhood peer relations and bullying, self-esteem, and loneliness. Approximately 12% of the participants were identified as bullies, 10% were victims of bullying, and the remaining 78% were referenced as “normals”. Data revealed no difference between victims, bullies, and normals regarding self-esteem in adulthood. However, both bullies and victims reported higher levels of loneliness compared to normals. Additionally, findings indicated a negative correlation between bullying victimization during childhood and self-esteem

in adulthood. A positive correlation between childhood victimization and loneliness was also found. It was suggested that the act of victimizing peers may increase a bully's self-esteem or self-worth. It would be useful to determine if these esteem building strategies are used through adulthood as well.

Holt, Finkelhor, and Kantor (2007) surveyed a large sample of 5th grade students about victimization, bullying, and psychological functioning in order to determine the impact of multiple victimizations on psychosocial functioning and academic performance. Approximately 25% of the students were classified as "primarily peer victims" (i.e. bullying victims) and 10% were classified as "multiple victims," meaning they were victimized by peers as well as in other domains (e.g. family, crime, sexual, etc.). Primarily peer victims were at risk for serious psychological and academic problems. Multiple victims showed a higher risk for psychological, academic, and social difficulties. Suicidal ideation was found among approximately 33% of both primarily peer victims group and the multiple victims group. While primarily peer victims experienced peer bullying, multiple victims group reported higher levels of peer bullying.

Research has shown bullying/victimization affects a significant group of children and adolescents resulting in a variety of consequences and psychological distress. While bullying was once thought to be part of childhood or a rite of passage, these consequences may have an impact that extends into adulthood.

Cyberbullying

Cyberbullying is aggression using technological means. Cyberbullying involves victimizing targets through social networking sites, blogs, video uploads, instant messaging, text messaging, and cell phone technology. Reports of specific bullying behaviors have included:

name calling, spreading rumors or lies, threats (vague and/or severe, including threatening to kill the victim), ignoring the victim, revealing confidential information about the victim, teasing or ridiculing the victim, and sexual harassment (Burgess-Proctor, Patchin, & Hinduja, 2009).

Prevalence rates of cyberbullying are more difficult to assess than prevalence rates of traditional bullying because cyberbullying has only recently become a focus of research. While various research teams have examined cyberbullying and its prevalence, some studies have only focused on a specific type of cyberbullying (e.g. internet only). As with traditional bullying, there are difficulties in obtaining accurate prevalence rates due to the use of different definitions and measures employed across researchers.

Kowalski and Limber (2007) sought to determine the prevalence of electronic bullying using a large sample of middle school children. Children were administered measures of bullying and victimization and a questionnaire about experiences with cyberbullying over the last two months. Analyses revealed that 11% had been victims of electronic bullying, 7% had been both victims and perpetrators, and 4% had been perpetrators of electronic bullying. The authors suggested results may underestimate prevalence rates of cyberbullying due to the limited time frame examined.

A large sample of seventh grade students in urban area schools were surveyed about their experiences with victimization and perpetration regarding traditional bullying and cyberbullying. Analysis revealed that nearly 25% of participants had been victims of cyberbullying and 15% were perpetrators of cyberbullying. Analyses also revealed that 54% of the students were bullying victims and nearly one-third had bullied others. It was suggested that cyberbullying may be on the rise (Li, 2007).

Ybarra and Mitchell (2007) conducted a study examining the prevalence and frequency of perpetration of internet harassment. Internet harassment was operationalized as using the “internet to harass or embarrass someone they were mad at” and/or making “rude or nasty comments to someone else online.” A large sample of children and adolescents 10-17 years of age were surveyed via telephone concerning harassment perpetration, victimization, behavior problems, and internet use. Analyses revealed that 6% of the participants endorsed frequent perpetration of internet harassment, 6% endorsed occasional perpetration of internet harassment, and 17% endorsed limited internet harassment perpetration. It was suggested that internet harassment may introduce a different power structure to bullying which may result in an increase in number of older adolescents engaging in this behavior.

Smith et al. (2008) administered measures of bullying, victimization, and cyberbullying to a small sample of students aged eleven to sixteen from schools in London. Focusing on their experiences within the last two months, analyses revealed 6.6% of the participants had experienced cyberbullying often and 15.6% were cyber bullied once or twice. In a second study using similar procedures, Smith and colleagues found similar levels of bullying and that victims were cyber bullied most frequently by instant messages and phone calls (Smith et al., 2008).

Raskauskas and Stoltz (2007) explored electronic bullying and its prevalence among adolescents. A sample of 84 participants, ages 13-18, were administered measures of internet experiences. Analyses revealed 48.8% of youth surveyed indicated being victims of electronic bullying, and 21.4% indicated being electronic bullies. The authors suggested that relative to traditionally bullying, electronic bullying may contribute to high rates of bullying behavior because it allows victims to respond immediately in anger to being bullied, therefore intensifying the bully-victim interaction.

Juvonen and Gross (2008) surveyed a large group of adolescents ranging in age from 12 to 17 via a website about their experiences using various types of electronic communication and bullying. Analyses revealed 72% had been victims of cyberbullying at least once, and 19% had been cyber bullied repeatedly. The authors found large overlap (85%) between cyberbullying and bullying in schools. It was suggested that the internet allows bullies to reach their victims beyond the school yard.

While definitions and frequency vary across studies, it appears the prevalence of cyberbullying is quite high. Approximately 25-50% of children/adolescents have been victims of cyberbullying at least once, and in some more recent studies that percentage is higher. Traditional bullying is typically most likely to occur in younger grade levels and tends to decrease in occurrence as children age. Frequency of cyberbullying appears to increase with age (Ybarra & Mitchell 2007). Ybarra and Mitchell (2004) found that boys and girls were both just as likely to cyber bully.

Consequences of Cyberbullying

As with traditional bullying, cyberbullying may also result in many negative consequences. Ybarra and Mitchell (2007) investigated bullying and its impact on health in adolescent victims and perpetrators. Using a large sample of youth between the ages of 10-17, harassment perpetration, psychosocial problems, behavior, and internet use were assessed. Analyses revealed a relationship between perpetration of harassment and behavior problems (i.e. aggression, rule breaking, and withdrawn/depressed) and some psychosocial problems. Adolescents were more likely to become victims of cyberbullying if they had bullied others online and cyberbullying perpetrators were more likely to report being victims of traditional

bullying. The authors suggested that older youth who are perpetrators may have deficits in the social skills needed for typical adult development.

In a national telephone survey using a large sample of 10-17 year old youth and their caregivers, Ybarra and Mitchell (2004) administered measures of online harassment, caregiver-child relationship, psychosocial challenge, internet use, and youth characteristics. Analyses revealed 44% of cyber bullies had a very poor emotional bond with their caregivers. They also tended to report more frequent parental or caregiver discipline and less monitoring by caregiver. Data also revealed youth were significantly more likely to engage in cyberbullying perpetration if they engaged in delinquent behavior, frequent substance use, were victims of traditional bullying, and/or were victims of cyberbullying. The authors suggested that characteristics of the cyber atmosphere, such as anonymity in the cyber environment, lack of immediate consequences and instant feedback may contribute to cyberbullying behavior by youth who might not engage in traditional bullying behavior.

Ybarra (2004) surveyed youth ages 10-17 on internet harassment, depressive symptoms, internet use, substance use, peer relationships, psychosocial challenges (e.g. recent move, family death, parental divorce, etc), and demographics. Analyses revealed 13.4% of cyberbullying victims indicated symptoms of major depression, and 16.5% reported symptoms of minor depression. Nearly 30% of cyberbullying victims indicated they were extremely or very upset as a result of bullying. Major depressive symptomology significantly increased the odds of being victimized by cyberbullying for males. The authors were surprised this relationship was not observed for females, as male and female rates of cyberbullying victimization did not differ. It was suggested that major depression symptomology could impact perception of threat, resulting in these youth perceiving higher incidences of cyberbullying interactions.

Hinduja and Patchin (2007) examined offline consequences (e.g. emotional/psychological distress and negative behavioral outcomes such as drug and alcohol use, shoplifting, and skipping school) of cyberbullying victimization using a large sample of adolescents (average age of 14.7). Participants completed measures of cyberbullying victimization, strain, and offline problem behaviors. Analyses revealed anger (30% of victims) and frustration (34% of victims) were the most common emotional responses to cyberbullying victimization. Relative to non-victims, cyberbullying victims were significantly more likely to report engaging in problem behaviors, most commonly reported drinking liquor, cheating on a school test, skipping school, and assaulting a peer.

Loneliness

Loneliness is a prevalent experience for many individuals. The impact of loneliness on psychological distress and health has been a focus of research for many years across a variety of populations. Loneliness has been defined as the “unpleasant experience that occurs when a person’s network of social relationships is significantly deficient in either quality or quantity” (Perlman & Peplau, 1984).

Cacioppo et al. (2006) examined loneliness and its relationship to depressive symptomology through two studies utilizing middle aged and older adult participants. Measures were administered to assess loneliness, depressive symptoms, psychosocial risk factors (such as perceived stress and social support), and hostility. Analyses revealed a significant association between higher levels of loneliness and high levels of depressive symptoms, which they state is consistent with previous research. Additionally, they found that loneliness is a unique predictor

of depressive symptomology, even after controlling for other variables (demographic variables and psychosocial risk factors).

Ladd and Ettekal (2013) examined loneliness during adolescence and its association with depressive symptoms using data collected through a large longitudinal study which followed children and their families beginning in kindergarten. These data gathered from assessments of loneliness and depressive symptoms given during grades 6 through 12, allowed an examination of how loneliness changes during crucial developmental period of adolescence, and how changes in loneliness over time may interact with feelings of depression. Analyses revealed an overall decline in peer-related loneliness from early adolescence onward. With regard to depressive symptoms, data indicated overall low levels of reported depressive symptoms and little movement throughout adolescence, which the authors described as “more age invariant than are peer-related feelings of loneliness”. As expected, loneliness and depressive symptoms were positively correlated.

Aanes, Mittelmark, and Hetland (2010) examined a lack of social connectedness (e.g. loneliness) as a mediating factor in the relationship between interpersonal stress and psychological distress. A random sample of participants ages 40-47, derived from a large health study in Norway, completed measures of interpersonal stress, loneliness, and health outcomes. It was hypothesized that there are direct, as well as indirect pathways of interpersonal stress that lead to depressive symptoms, anxiety symptoms, and somatic symptoms, and can be mediated by loneliness. Analyses revealed significant correlations between interpersonal stress and psychological distress as well as somatic symptoms. Loneliness appeared to impact depressive symptoms and somatic symptoms differently. Results indicated that for depressive symptoms, 75% of the total effect was mediated by loneliness as compared to 40% of the total effect with

somatic symptoms. It was suggested that these findings support the notion (introduced within belongingness literature) that depression can be a result of “threats in the social environment”.

Loneliness and Bullying

While there have been fewer studies examining bullying and aggressive behavior and its consequences, especially with the college population, research has found higher levels of loneliness to be positively correlated with elevated levels of bullying victimization and perpetration (Tritt & Duncan, 1997). With the strong association between loneliness and psychological distress, and bullying often being a source of significant stress, it seems imperative that the specific relationship between loneliness and bullying be investigated further.

Check, Perlman, and Malamuth (1985) investigated the relationship between loneliness and aggressive behavior. Two studies were conducted, one with a sample of undergraduate male students and one with a community male sample. Participants were administered measures of loneliness, acceptance of interpersonal violence, adversarial sex beliefs, acceptance of violence in general, hostility, and sexual aggression. As expected, analyses revealed loneliness was correlated with some measures of aggression. Interestingly, it was noted that correlations were “generally larger” for the sample of undergraduate students (in contrast to the community sample). It was suggested that loneliness and hostility are not merely connected, but are actually “determinants of each other, such that lonely people create negative social environments for themselves due to their poor social skills, thus leading to rejection and isolation from others, which in turn leads to further feelings of loneliness and pessimism.”

Using a sample of undergraduate men and women, Tritt and Duncan (1997) sought to determine the impact of childhood bullying on self-esteem and loneliness in adulthood.

Participants were asked to complete a questionnaire about peer relations (e.g. bullying) in reference to retrospective childhood experiences. Additionally, measures of self-esteem and loneliness were also administered. Analyses revealed significantly higher levels of loneliness for bullying victims and perpetrators, but only victims indicated an impact on self-esteem. The authors suggested that “young adult loneliness alone seems to be a significant predictor of the level of childhood bully victimization.”

Resilience

While experiencing significant life stressors or traumatic events can certainly negatively impact psychological well-being, it is clear that not every individual will experience negative outcomes as a result. Smith et al. (2010) defined resilience as “the ability to bounce back from stress.” Researchers differ in their view concerning whether resilience is a stable construct, or if it fluctuates throughout the lifespan. Smith and colleagues (2010) suggested that “resilience may develop when a person with a sufficient amount of coping resources comes to believe through experience, example, or encouragement that they can bounce back from stress.”

There appears to be a relationship between resilience and psychological well-being. Bitsika, Sharpley, and Peters (2010) investigated the association between resilience, anxiety, and depression. A large sample of undergraduate students in Australia was administered measures of anxiety, depression, and resilience. Analyses revealed that higher scores on the resilience measure were significantly associated with lower scores of anxiety and depression. It was noted that these findings are consistent with previous research. It was suggested that interventions may

prevent or reduce anxiety and depression in college student populations by focusing on methods to build resilience.

The concept of resilience has been a focus of research with regard to trauma and rehabilitation. Catalano and colleagues (2011) examined depression in individuals with spinal cord injuries and the possible buffering effect of resilience. Resilience was described as having positive, or “substantially better than expected” outcomes in spite of exposure to significant stress or adversity. A large sample of participants (ages 18-79) with spinal cord injuries (SCI) was recruited through membership with the Canadian Paraplegic Association. Measures of severity of SCI-related stressors, perceived stress, social support, problem-focused coping, resilience, and depressive symptoms were administered. Analyses revealed depressive symptoms to be directly predicted by both perceived stress and resilience. While severity of SCI-related stressors did not directly influence depressive symptoms, it did significantly influence perceived stress, which was found to be a direct predictor of depressive symptoms. Data indicates an inverse relationship between resilience and depressive symptoms, suggesting that resilience may act as a buffer against depression in individuals with spinal cord injuries.

Newton-John, Mason, and Hunter (2014) investigated the role of resilience in coping with chronic pain using a sample of Australian individuals recruited through a pain clinic. All participants were over 18 years old (with a mean age of 43) and reported experiencing chronic pain for more than one year. Self-report measures of pain coping, pain outcomes (such as the Depression Anxiety Stress Scale), and resilience were administered. Analyses revealed resilience to be positively associated with pain self-efficacy, social support, and attending work. Resilience was found to be negatively associated with pain intensity, fear of movement or re-injury, and pain-related disability. It was noted that contrary to predictions, resilience did not significantly

predict depression or pain catastrophizing in the sample. It was suggested that resilience may be an important factor with regard to positive adjustment and coping in individuals with chronic pain.

Resilience and Bullying

Just as resilience has been found to be associated with how people respond to major life stressors, such as trauma, it is also suggested resilience may play a role in how people respond to being bullied. Donnon and Hammond (2007) defined resilience as “the ability of children and adolescents to cope successfully in the face of stress-related, at-risk or adversarial situations,” and sought to investigate the relationship between bullying and resilience in junior high age adolescents. A large sample of Canadian youth in grades 7, 8, and 9 were administered the Youth Resiliency: Assessing Developmental Strengths (YR: ADS) questionnaire, which assessed for bullying and resiliency, along with a demographic questionnaire. Analyses revealed that bullying was quite prevalent in the sample, with approximately 31% of participants being bullied at least once a month. Bullying perpetration was examined by grade level; finding that 36% of participants in grade 7, 30% in grade 8 and 29% in grade 9 reported bullying others “at least once during the past month.” Furthermore, data revealed that the average student in the sample reported having a relatively high number of developmental strengths (examples of strengths endorsed on the YR: ADS include “positive peer relationships” and “caring family”), but that the number of reported resiliency strengths appears to decline as age or grade level increases. Youth having the fewest number of reported strengths were found to be “over two times more likely to be victims of bullying.” It was noted that recently research has moved more toward focusing on “understanding of how resiliency strengths and processes allow some individuals to cope more effectively than others” rather than simply identifying protective factors.

Using a large sample of adolescents (from age 12 through age 14) from a longitudinal study in Scotland, Sapouna and Wolke (2013) investigated resilience to bullying victimization by examining depression and delinquency following victimization. One focus of this work was how individual, family, and peer characteristics may impact resilience. Resilience was defined as manifesting “positive outcomes over time despite facing significant adversities.” Participants were assessed for bullying, depression, delinquency, self-esteem, social alienation, parental conflict, sibling victimization, size of peer group, and emotional and behavioral resilience. Analyses revealed a significant correlation between being a victim of bullying at age 13 and higher levels of depression and delinquency a year later. However, data revealed several variables predicted “emotional resilience” (less depression than expected) to bullying victimization; being male, having high self-esteem, feeling less socially alienated, low levels of parental conflict, and low sibling victimization. Additionally, several variables also predicted “behavioral resilience” (less delinquency than expected); being female, having higher self-esteem, low levels of parental conflict, low sibling victimization, and fewer close friends. It was suggested that interventions focus on further developing psychosocial competence and improving family relationships.

Bowes, et al. (2010) examined the role of families in emotional and behavioral resilience to bullying victimization. Using a large sample of children from a longitudinal twin study in England and Wales (followed from age 5 to age 12), bullying victimization, emotional and behavioral problems, family factors (i.e. maternal warmth and sibling warmth), atmosphere at home, and covariates (i.e. IQ, socioeconomic disadvantage, and baseline emotional and behavioral problems) were assessed. Additionally, authors determined scores for emotional resilience and behavioral resilience to bullying victimization. Analyses revealed a significant

association between maternal warmth, sibling warmth, and a positive atmosphere at home; and resilience to bullying victimization. Maternal warmth was the most significant factor influencing behavioral problems with bullying victimization. Children experiencing more maternal warmth seemed to exhibit fewer behavioral problems. It was suggested that children who are victimized by bullying may benefit from positive family relationships; specifically, a positive family home atmosphere may assist children in developing coping mechanisms and reducing stress.

Research has shown that bullying has detrimental effects for both bullies and victims. Data also indicates that bullying, especially chronic levels of bullying, during childhood may lead to lasting negative effects in adulthood. The recent introduction of bullying through electronic media has sparked interest in examining bullying with older adolescents and young adults, as early research on cyberbullying suggests that this is a growing problem in the young adult population (Tritt & Duncan, 1997; Newman, Holden, & Delville, 2005).

Data also indicate that loneliness may mediate the relationship between life stress, such as bullying, and negative psychosocial outcomes (Aanes, Mittelman, & Hetland 2010). While bullying may certainly lead to negative consequences such as depression and anxiety, not every victim experiences these outcomes. Resilience has been suggested as a factor that may account for differences in whether or not individuals exposed to significant life stress experience negative psychosocial outcomes. The purpose of the present study was to examine the relationships among cyberbullying, loneliness, resilience, and psychosocial health in college students. It was predicted that the experience of cyberbullying will negatively predict psychosocial outcomes as mediated through loneliness; and that resilience would moderate the relationship between loneliness and psychological well-being.

METHODS

Participants

Participants were 543 male and female undergraduate students ranging in age from 18 to 30 plus years from a public university in the southeastern United States. The sample was predominantly female (71.1%), 18 or 19 years old (71.7%), and Caucasian (69.6%).

Measures

Demographics

Participants completed a short questionnaire that provided demographic data such as age, gender, race/ethnicity, years in college, and sexual orientation.

Cyberbullying Scale

The Cyberbullying Scale (CBS; Stewart, Drescher, Maack, Ebestuani, & Young, 2014) was designed to measure cyberbullying victimization with adolescents. The CBS is a self-report measure comprised of 16 items and inquires about cyberbullying experiences over the “past few months.” The first two items assess methods of cyber victimization and perpetration (e.g. via email, text messages, social media websites, etc.) and the remaining items use a 5-point Likert-type rating scale; ranging from ‘never’ to ‘all the time’. A total score is calculated by summing scores for items 3 through 16. Higher scores indicate higher frequency of cyberbullying

victimization. The CBS has demonstrated good internal consistency ($\alpha = .94$) and concurrent validity. The CBS correlated highly with constructs such as anxiety, depression, and loneliness (Stewart et al., 2014). As this measure will be used in a young adult college population, items using the word “kid” were modified to “college student” in order to be more relevant to the population in this study.

UCLA Loneliness Scale (Version 3)

The UCLA Loneliness Scale – Version 3 (Russell, 1996) was developed to measure loneliness with a variety of populations. It is comprised of 20 items, 11 of which are worded negatively and the remaining 9 items are worded positively. Participants are asked to indicate how often they feel what is described in the individual item using a 4 point Likert-type scale, ranging from “never” to “always.” A total score is determined by first reverse scoring 9 of the items (items 1, 5, 6, 9, 10, 15, 16, 19, and 20) and then summing all of the item scores. Higher scores indicate higher levels of loneliness. The UCLA Loneliness Scale (Version 3) has demonstrated good internal consistency ($\alpha = .89$ to $.94$). The measure has also demonstrated good construct validity, as well as good convergent validity, as evidenced by “highly significant correlations” with other established measures of loneliness (Russell, 1996).

The Brief Resilience Scale

The Brief Resilience Scale (BRS; Smith et al., 2008) was designed to measure resilience, or “the ability to bounce back or recover from stress.” The BRS is a brief 6 item self-report measure which asks participants to “please indicate the extent to which you agree with the following statements.” Half of the items (1, 3, and 5) are worded positively, while the remaining items (2, 4, and 6) are worded negatively. The BRS uses a 5-point Likert-type rating scale;

ranging from “strongly disagree” to “strongly agree”. A total score is determined by first reverse coding items 2, 4, and 6, and then calculating the mean of the 6 items. The BRS has demonstrated good internal consistency ($\alpha = .80$ to $.91$) and test-retest reliability. Additionally, the BRS has demonstrated good concurrent validity and discriminate validity (Smith et al., 2008).

Depression Anxiety Stress Scales, 21 Items

The DASS-21 is a 21 item instrument, developed to be a shorter version of the original DASS (a 42 item questionnaire), which measures levels of depression, anxiety, and stress symptoms for individuals. Antony et al. (1998) suggested the DASS-21 has many advantages over other similar measures, including the original DASS, due to its apparent ability to better distinguish depression and anxiety more independently. The DASS-21 consists of 3, 7 item subscales; Anxiety, Depression, and Stress. Participants use a rating scale of 0-3 to endorse severity/frequency of symptoms based on the statement presented for each item. Item scores will be summed for each subscale and multiplied by 2; resulting in individual scores for depression, anxiety, and stress. The three subscale scores are added together to create a total score. Each score will fall into one of the categories of severity (normal, mild, moderate, severe, or extremely severe). Good internal consistency was demonstrated for each of the subscales; Depression ($\alpha = .94$), Anxiety ($\alpha = .87$), and Stress ($\alpha = .91$). Good concurrent validity has also been demonstrated for this measure (Antony et al., 1998).

Procedure

Participants were recruited through SONA Systems, an online participant recruitment and management site at the University of Mississippi. Students enrolled in psychology courses

received research credit in exchange for their participation. Qualtrics, a web based survey system (Qualtrics, Provo, UT), was used to anonymously administer measures. Prior to administration of measures, participants viewed a letter of informed consent which briefly described the nature of the study, confidentiality of responses, and right to withdraw from the study at any time without penalty. Participants were given an unlimited amount of time to complete questionnaires and a counter balanced presentation of measures was used

RESULTS

Preliminary Analysis

Prior to conducting main analyses, response time effort for each participant was evaluated. It was assumed that a minimum amount of time is required for a participant to fully read and answer each item; therefore response time was used to identify outliers. The distribution of data was examined and the Outlier Labeling rule was used to remove 250 participants identified as outliers with response duration times of fewer than 450 seconds (7.5 minutes). An additional 3 participants were removed due to completion of only the initial demographic questionnaire, and 6 participants were removed based on age, falling 2 standard deviations above the mean (30+ years). Three univariate outliers more than 3.5 standard deviations from the mean were removed, one on the CBS and two on the DASS Depression subscale. Mahalanobis distance did not identify any multivariate outliers. The resulting final sample consisted of 281 participants. Demographic information for the final sample of participants is presented in Table 1.

Table 1. Descriptive Statistics of Participants (n= 281)

	Frequency	Percentage
Gender		
Male	77	27.4
Female	204	72.6
Age		
18	71	25.3
19	131	46.6
20	41	14.6
21	22	7.8
22	5	1.8
23-29	11	3.9
Race/Ethnicity		
European/Caucasian	197	70.1
African American	54	19.2
Asian	15	5.3
Hispanic	7	2.5
Other	8	2.8
Years in College		
1	182	64.8
1-2	55	19.6
2-3	21	7.5
3-4	17	6.0
4+	6	2.1

Sexual Orientation		
Heterosexual	268	95.4
Bisexual	4	1.4
Homosexual	7	2.5
Asexual	2	0.7

Examination of skewness and kurtosis revealed distributions for the CBS, UCLA, DASS subscales, and DASS Total Score were positively skewed, and the BRS was negatively skewed. Kurtosis for the DASS Stress subscale, the UCLA, and the BRS indicated relatively flat distribution. However, the final analyses (moderated mediation) and the 95% bootstrapped confidence intervals produced by the Hayes 2013 Process Macros utilize an inferential statistic that does not assume normal distribution, therefore data were left untransformed. Skew and Kurtosis indices are presented in Table 2. Data were collected using Qualtrics ensuring there were no errors in data entry. Analyses of missing values indicated there were no variables with more than 5% missing values and based on Little's MCAR test for significance, conducted across all measures, data were assumed to be missing at random ($p < 0.05$). Missing data were imputed using the expectation maximization algorithm, a technique using available data, regression based techniques, and maximization likelihood estimation to fill in missing values.

Table 2. Skew and Kurtosis Indices

	Skew (SE = .15)	Kurtosis (SE = .29)
DASS-21 Depression	1.24	.92
DASS-21 Anxiety	1.22	.86

DASS-21 Stress	.57	-.24
DASS-21 Total	.89	.14
UCLA Total	.27	-.28
CBS Total	1.25	1.09
BRS Total	-.16	-.40

Reliability and descriptive statistics were obtained for all measures and are shown in Table 3. A correlation matrix was computed in order to examine relationships among variables of interest (Table 4). As expected, a number of significant relationships were observed. There were significant positive relationships between DASS subscales and UCLA, DASS subscales and CBS, DASS Total Score and UCLA, and DASS Total Score and CBS. Additionally, there were significant negative relationships between the BRS and DASS subscales, BRS and DASS Total Score, BRS and UCLA, and BRS and CBS.

Table 3. Descriptive Statistics for Key Variables

	Mean	SD	A
DASS-21 Depression	7.46	7.981	.893
DASS-21 Anxiety	6.58	7.241	.827
DASS-21 Stress	11.27	8.733	.863
DASS-21 Total	25.31	21.610	.938
UCLA Total	41.26	9.649	.906
CBS Total	20.48	6.882	.918
BRS Mean	3.395	0.729	.850

Table 4. Bivariate Relationships Among Measures

	1	2	3	4	5	6	7
1.DASS_Dep	-	.668**	.741**	.892**	.555**	.268**	-.471**
2.DASS_An timer		-	.744**	.882**	.404**	.276**	-.389**
3.DASS_Stress			-	.927**	.494**	.251**	-.480**
4.DASS_Total				-	.540**	.293**	-.499**
5.UCLA					-	.283**	-.469**
6.CBS						-	-.209**
7.BRS							-

Cyberbullying Prevalence and Frequencies

Prevalence rates for participant responses on the CBS are presented in Tables 5 through 7. Responses to CBS Item 1 “Do other college students use any of the following to bully you?” and CBS Item 2 “Do you use any of the following to bully other college students?” revealed that 55.5% of participants indicated being victims of cyberbullying and 27.4% indicated they have cyber bullied others. From the group who were identified as cyber bullies, all but one also endorsed being victims of cyberbullying, resulting in 27% of participants being categorized as cyber bully/victims.

Table 5. Prevalence of Cyberbullying Scale- Victimization (Frequency and Percentages)

	Frequency	Percentage
E-mail	10	3.6
Online video clips of you	10	3.6
Text messages/Twitter	112	39.9
Social networking site (like Facebook)	75	26.7
Picture Messages	30	10.7
Chatroom	10	3.6
Instant messaging	13	4.6
Virtual World (like Second Life or the Sims)	10	3.6
Developed a mean website or message board about you	4	1.4

Table 6. Prevalence of Cyberbullying Scale- Perpetration (Frequency and Percentages)

	Frequency	Percentage
E-mail	1	0.4
Online video clips of you	5	1.8
Text messages/Twitter	58	20.6
Social networking site (like Facebook)	33	11.7
Picture Messages	14	5.0
	30	

Chatroom	6	2.1
Instant messaging	5	1.8
Virtual World (like Second Life or the Sims)	2	0.7
Developed a mean website or message board about you	2	0.7

Table 7. Cyberbullying Scale Prevalence Items 3 -16 “How often Do/How often Does/How often Has/ How often Have” (percentages)

Item	Never	Almost Never	Sometimes	Almost All the Time	All of the Time
3. You get online or text messages from another person threatening to beat you up	77.2	17.8	4.3	0.4	0.4
4. Other people leave you out of online groups on purpose	49.8	29.9	18.9	1.1	0.4
5. Another person say something mean to you (like calling you names or making fun of you) in a text message or online	38.4	31.7	25.6	3.9	0.4
6. A person who is mad at you try to get back at you by not letting you be in their online group anymore	60.9	23.5	14.9	0.7	0.0
7. You get text or online messages that make you afraid for your safety	80.8	13.9	4.3	1.1	0.0
8. A person tell lies about you in texts or online to make other people not like you anymore	50.5	27.0	20.6	1.8	0.0
9. Another person say online that they won't like you unless you do what they want you to do	77.9	15.7	4.6	1.4	0.4
10. People try to keep others from liking	64.8	21.0	12.0	2.1	0.0

you by texting or posting mean things about you					
11. Another person send you a message saying they will beat you up if you don't do what they want you to do	87.5	8.9	2.8	0.7	0.0
12. You get in online fights	67.3	23.8	0.4	7.1	1.4
13. Another person put you down online by sending or posting cruel gossip, rumors, or something else hurtful	65.1	22.4	11.0	1.4	0.0
14. Has another person pretended to be you and sent or post something that damages your reputation or friendships	77.6	17.1	4.6	0.7	0.0
15. Another person share your personal secrets or images online without your permission	70.1	19.9	8.9	1.1	0.0
16. Have you had to ask for help to fix something bad that happened to you online (like a mean picture of you was posted, people called you names, someone threatened you)?	72.3	21.4	5.3	0.7	0.4

Main Analyses - Moderated Mediation

It was hypothesized that the experience of cyberbullying (X) will predict negative psychosocial outcomes (Y) as mediated through level of loneliness (M). Additionally, given the rationale that resilience potentially serves as a protective factor, it was hypothesized that resilience (V) would moderate the relationship between loneliness (M) and negative psychosocial outcomes (Y). The moderated mediation hypothesis was examined by estimating the loneliness by resilience interaction predicting psychosocial outcomes. This model (shown in Figure 1) provided a test of whether the relationship between cyberbullying experiences and

loneliness with resilience predicted psychosocial outcomes. Hayes' Model 14 was selected for this study and the PROCESS procedure for SPSS (Hayes, 2013) was used to examine the total, direct, and indirect effects of cyberbullying on negative psychosocial outcomes (depression, anxiety, and stress) through loneliness, with resilience as a moderating variable. The number of bootstrap samples for bias corrected bootstrap confidence intervals was 5000, with a 95% confidence interval of the indirect effects. Results are summarized in Table 8.

Figure 1

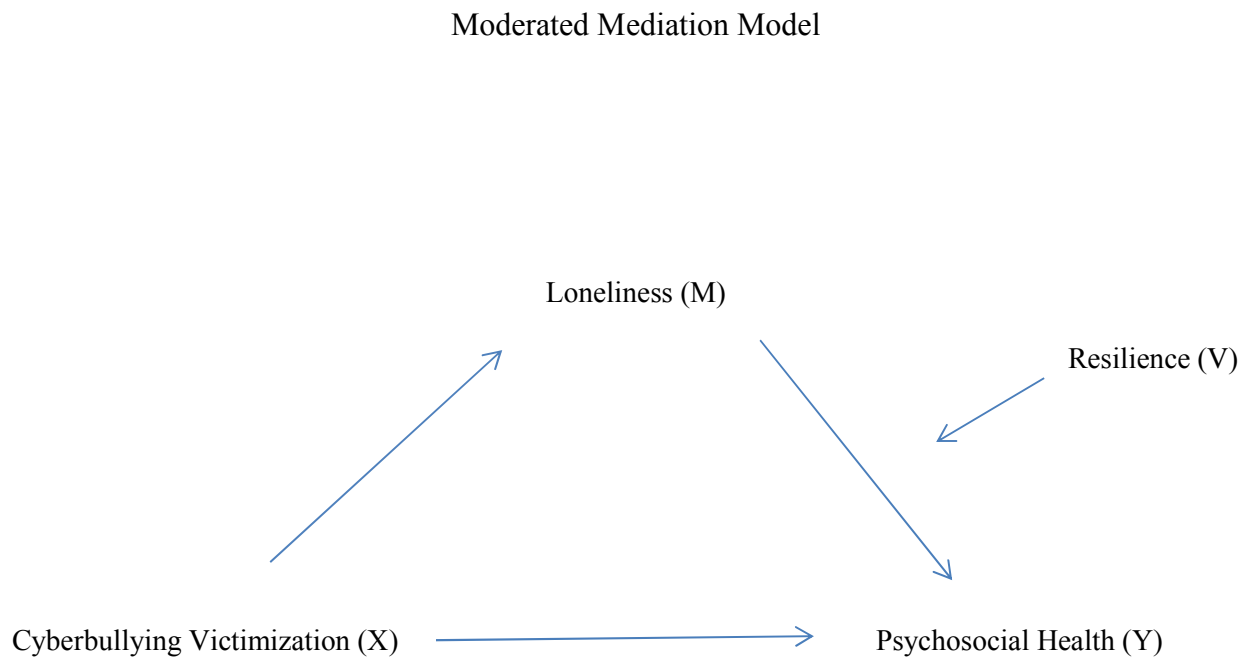


Table 8. Moderated Mediation Results for Outcome: TotalDASS

Predictor	<i>B</i>	<i>SE</i>	<i>T</i>	<i>P</i>	95% CI
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					<i>LL</i>	<i>UL</i>
Constant	12.80	21.59	.59	.55	-29.69	55.30
UCLATotal	.80	.47	1.72	.09	-.12	1.73
CBSTotal	.45	.15	2.94	<.01	.1489	.75
BRSTotal	-9.01	5.87	-1.54	.13	-20.56	2.54
Int 1	.01	.14	.04	.97	-.26	.27

*Note. Int 1 = UCLATotal X BRSTotal

The overall model was significant ($R^2=.39$, $df=4$, 276 , $F=43.71$, $p<.0001$). However, the moderated mediation effect was not significant (index = .0018, SE = .04, 95% CI [-.08, .09]). Because the overall indirect effect was not significant, a separate analysis with only the mediator present was then performed using the PROCESS procedure through SPSS. The mediation analysis revealed the indirect effect of cyberbullying on negative psychosocial outcomes, through loneliness, to be .37 (95% CI = .19 - .57). As the bootstrapped confidence interval did not include zero, the null hypothesis that the total indirect effect is zero was rejected, as the mediation effect was found to be significant at $p<.05$. To the degree that significant differences were not evident, no follow-up analyses on the moderated mediation were necessary.

DISCUSSION

Present findings suggest involvement in cyberbullying (as victim, bully, or bully/victim) is a common experience for many college students, which is consistent with previous research (Roberto, et al., 2014; Dilmac, 2009; Doane, et al., 2016). In the current study, a large number of participants reported having been victims of cyberbullying over the last few months (55.5%). An additional 27.4% reported being perpetrators of cyberbullying. Interestingly, almost the entire group of self-identified cyber bullies (all but one participant) also endorsed being victims of cyberbullying over the last few months, putting them into the cyber bully/victim category as well (27%).

Examination of the correlation matrix revealed depression, anxiety, stress, and loneliness were positively correlated with cyberbullying. This is consistent with previous research examining involvement in bullying and psychological functioning (Bonanno & Hymel, 2013; Ybarra & Mitchell, 2007; Newman, Holden, & Delville, 2005). Additionally, as expected and consistent with previous findings on the relationship between resilience and psychological functioning (Catalano, et al., 2011; Smith, et al., 2010; Bitsika, Sharpley, & Peters, 2010), resilience was negatively correlated with loneliness, depression, anxiety, and stress.

As expected, loneliness was found to be a mediator of the relationship between cyberbullying and negative psychosocial outcomes. Participants who endorsed involvement in cyberbullying and feelings of loneliness also reported elevated levels of depression, anxiety, and stress as measured by the DASS-21. This finding is consistent with previous research suggesting

loneliness to be an important variable affecting psychological outcomes (Switaj, et al., 2014; Aanes, Mittelmark, & Hetland, 2010; Cacioppo, et al.2006) and has been found to be associated with cyberbullying victimization and perpetration (Sahin, 2012; Tritt & Duncan, 1997).

Resilience has consistently been found to be a protective factor against negative psychosocial outcomes in a variety of situations and populations (Hoge, Austin, & Pollack, 2007; Anyan & Hjemdal, 2016; Min, Lee, & Chae, 2015). Therefore, it was predicted that resilience would moderate the relationship between loneliness and negative psychosocial outcomes (depression, anxiety, and stress) in the context of cyberbullying involvement. Contrary to expectations, the present study did not find resilience moderated that relationship.

The failure to find resilience as a moderator of the above relationship may be due to a lack of a measure robust enough to account for the multiple factors currently viewed as comprising resilience. Olsson and his colleagues (2003) reviewed research on resilience in adolescence and composed a list of factors thought to contribute to resilience, including: positive temperament, attachment to others, academic achievement, self-esteem, internal locus of control, parental encouragement, and supportive peers. The Brief Resilience Scale was developed with a focus on health related stress (e.g. cardiac rehabilitation and chronic pain patients) rather than psychosocial stress, and therefore aims to assess “resilience in its original and most basic meaning: to bounce back or recover from stress” (Smith et al., 2008). Several researchers have suggested resilience to be a multi-dimensional or interactive concept (Rutter, 2006; Lamond et al., 2009; Burns & Anstey, 2010). Moreover, Rutter (2012) asserted that resilience must be inferred rather than measured directly “as if it was a characterological trait”. While the Brief Resilience Scale is considered to be a psychometrically sound measure of resilience (Windle, Bennett, & Noyes, 2011), it simplifies the assessment of resilience by using only 6 questions and

collapsing resilience into a unitary construct (Smith et al., 2008). It may be fruitful for future work to consider using multiple measures of the construct to more fully reflect factors of resilience.

Limitations

There are several limitations in the present study that should be noted. The current study used a sample from a southeastern university that was largely comprised of Caucasian female participants. In order to determine generalizability of findings, it would be valuable to replicate this study using a more diverse sample. Additionally, a large portion of participants were removed prior to analyses due to their unusually rapid completion of the questionnaires. Future studies would benefit from adding measures that would safeguard against this issue and ensure integrity of responses. Meade and Craig (2012) examined careless responding in research surveys and suggested using identified rather than anonymous responses, as well as adding several “instructed response items (e.g. “Respond with ‘strongly agree’ for this item”)” in order to reduce and more easily identify careless responders among participants.

Future Directions

Previous research on traditional bullying has shown a general decline in rates of bullying as age increases. However, the introduction of bullying through electronic media has created a new avenue for individuals to engage in bullying behavior and, research on cyberbullying in older adolescence and young adulthood, including the current study, suggests prevalence of bullying behavior to be significant. It may be that bullying may actually increase with age. Several characteristics of cyberbullying may contribute to its prevalence. The introduction of electronic media as a means to victimize others may lessen or remove power imbalances, leading

to an increase in bullying perpetration from individuals who would not typically engage in traditional bullying. Additionally, cyberbullying often lacks the consequences or immediate feedback found with traditional bullying, possibly reducing fears of repercussion resulting in increased bullying behavior. Anonymity and the ability to transcend geographical distance may also contribute to the rise of cyberbullying behavior. While victims of traditional bullying typically know their offender, research has shown that cyber bullies may not personally know their victims (Patchin & Hinduja, 2006; Ehman, 2016). Moreover, a few recent studies have explored motivations behind cyberbullying behavior and found some individuals endorsed bullying others as entertainment or “just for fun” (Francisco et al., 2015; Rafferty & Vander Ven, 2014). In order to develop effective interventions to reduce prevalence and minimize negative psychosocial outcomes, it is crucial research continues to examine cyberbullying behavior and the motivations behind it.

Conclusion

The present study suggests that cyberbullying is a common experience for many college students and the negative impact of cyberbullying appears to depend on an individual’s feeling of loneliness. Future research might explore friendship as being an important moderator in the relationship between cyberbullying and negative psychosocial outcomes.

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LIST OF APPENDICES

APPENDIX A: CYBERBULLYING SCALE

The following questions ask about your life in the **PAST FEW MONTHS**. Please circle the best answer.

1. Do other college students use any of the following to bully you? (Circle all that have happened to you)

Email
Online video clips of you
Text messages/Twitter
Social networking site (like Facebook)
Picture messages
Chatroom
Instant messaging
Virtual world (like Second Life or the Sims)
Developed a mean website or message board about you

2. Do you use any of the following to bully other college students? (Circle all that you have used to bully)

Email
Online video clips
Text messages/Twitter
Social networking site (e.g. Facebook)
Picture messages
Chatroom
Instant messaging
Virtual world (like Second Life or the Sims)
Developed a mean website or message board about another college student

3. How often do you get online or text messages from another college student threatening to beat you up or hurt you physically?

Never Almost Never Sometimes Almost all the time All the time

4. How often do other college students leave you out of online groups on purpose?

Never Almost Never Sometimes Almost all the time All the time

5. How often does another college student say something mean to you (like calling you names or making fun of you) in a text message or online?

Never Almost Never Sometimes Almost all the time All the time

6. How often does a college student who is mad at you try to get back at you by not letting you be in their online group anymore?

Never Almost Never Sometimes Almost all the time All the time

7. How often do you get text or online messages that make you afraid for your safety?

Never Almost Never Sometimes Almost all the time All the time

8. How often does a college student tell lies about you in texts or online to make other college students not like you anymore?

Never Almost Never Sometimes Almost all the time All the time

9. How often does another college student say online that they won't like you unless you do what they want you to do?

Never Almost Never Sometimes Almost all the time All the time

10. How often does a college student try to keep others from liking you by texting or posting mean things about you?

Never Almost Never Sometimes Almost all the time All the time

11. How often does another college student send you a message saying they will beat you up if you don't do what they want you to do?

Never Almost Never Sometimes Almost all the time All the time

12. How often do you get in online fights?

Never Almost Never Sometimes Almost all the time All the time

13. How often does another college student put you down online by sending or posting cruel gossip, rumors, or something else hurtful?

Never Almost Never Sometimes Almost all the time All the time

14. How often does another college student pretended to be you and send or post something that damages your reputation or friendships?

Never Almost Never Sometimes Almost all the time All the time

15. How often does another college student share your personal secrets or images online without your permission?

Never Almost Never Sometimes Almost all the time All the time

16. How often have you had to ask for help to fix something bad that happened to you online (like a mean picture of you was posted, people called you names, someone threatened you)?

Never Almost Never Sometimes Almost all the time All the time

Appendix B: Depression Anxiety Stress Scale – 21 (DASS-21)

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all

1 Applied to me to some degree, or some of the time

2 Applied to me to a considerable degree, or a good part of time

3 Applied to me very much, or most of the time

1. I found it hard to wind down
2. I was aware of dryness of my mouth
3. I couldn't seem to experience any positive feeling at all
4. I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)
5. I found it difficult to work up the initiative to do things
6. I tended to over-react to situations
7. I experienced trembling (eg, in the hands)
8. I felt that I was using a lot of nervous energy
9. I was worried about situations in which I might panic and make a fool of myself
10. I felt that I had nothing to look forward to
11. I found myself getting agitated
12. I found it difficult to relax
13. I felt down-hearted and blue
14. I was intolerant of anything that kept me from getting on with what I was doing
15. I felt I was close to panic
16. I was unable to become enthusiastic about anything
17. I felt I wasn't worth much as a person
18. I felt that I was rather touchy
19. I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)
20. I felt scared without any good reason
21. I felt that life was meaningless

Appendix C: Brief Resilience Scale (BRS)

Instructions: Use the following scale and circle one number for each statement to indicate how much you disagree or agree with each of the statements.

1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

- | | | | | | |
|---|---|---|---|---|---|
| 1. I tend to bounce back quickly after hard times. | 1 | 2 | 3 | 4 | 5 |
| 2. I have a hard time making it through stressful events. | 5 | 4 | 3 | 2 | 1 |
| 3. It does not take me long to recover from a stressful event. | 1 | 2 | 3 | 4 | 5 |
| 4. It is hard for me to snap back when something bad happens. | 5 | 4 | 3 | 2 | 1 |
| 5. I usually come through difficult times with little trouble. | 1 | 2 | 3 | 4 | 5 |
| 6. I tend to take a long time to get over set-backs in my life. | 5 | 4 | 3 | 2 | 1 |

Appendix D: UCLA Loneliness Scale (Version 3)

Instructions: The following statements describe how people sometimes feel. For each statement, please indicate how often you feel the way described by writing a number in the space provided. Here is an example:

How often do you feel happy?

If you never felt happy, you could respond “never”; if you always feel happy, you could respond “always.”

<u>Never</u>	<u>Rarely</u>	<u>Sometimes</u>	<u>Always</u>
1	2	3	4

1. How often do you feel that you are “in tune” with the people around you?
2. How often do you feel that you lack companionship?
3. How often do you feel that there is no one you can turn to?
4. How often do you feel alone?
5. How often do you feel part of a group of friends?
6. How often do you feel that you have a lot in common with the people around you?
7. How often do you feel that you are no longer close to anyone?
8. How often do you feel that your interests and ideas are not shared by those around you?
9. How often do you feel outgoing and friendly?
10. How often do you feel close to people?
11. How often do you feel left out?
12. How often do you feel that your relationships with others are not meaningful?
13. How often do you feel that no one really knows you well?
14. How often do you feel isolated from others?
15. How often do you feel you can find companionship when you want it?
16. How often do you feel that there are people who really understand you?
17. How often do you feel shy?
18. How often do you feel that people are around you but not with you?
19. How often do you feel that there are people you can talk to?
20. How often do you feel that there are people you can turn to?

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Ph.D. Clinical Psychology
Anticipated 2016 University of Mississippi, Oxford, MS
Dissertation: *The Role of Loneliness and Resilience in Psychosocial Health for Victims of Cyberbullying in a College Population*

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B.A. Psychology, *cum laude*
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PROFESSIONAL AFFILIATIONS:

American Psychological Association (APA) – Student Affiliate
APA Division 54, Society of Pediatric Psychology – Student Affiliate
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CLINICAL EXPERIENCE:

Baptist Children's Village, Water Valley, MS (2013 – 2015)

Therapist and Behavior Consultant

Duties include conducting individual psychotherapy and implementing behavioral programming for children and adolescent residents in a group home.

Supervisor: Dr. Randy Cotton, Ph.D. – Director of Clinical Services

Mississippi Action for Progress – Head Start Program, MS (2009 –2015)

Mental Health Consultant

Duties include consulting with teachers and staff in Head Start preschools in several rural

counties in MS concerning classroom management strategies and effective interventions for preschool children with behavior difficulties and special needs.
Supervisor: Dr. Alan Gross, Ph.D.

Germantown Psychological Associates, Germantown, TN (2008 – 2015)

Graduate Examiner

Duties include administering comprehensive psychodiagnostic assessments (test administration, scoring, interpretation, and report-writing) based on clinical referral for children, adolescents, and adults.

Supervisor: Dr. Richard L. Luscomb, Ph.D.

Psychological Services Center, University of Mississippi (2007 – 2015)

Graduate Therapist

Duties include providing evidence-based psychotherapy and assessment services for children, adolescents, adults, and families.

Supervisor: Dr. Alan Gross, Ph.D., Dr. John Young, Ph.D., Dr. Scott Gustafson, Ph.D., Dr. Danielle Maack, Ph.D.

North Mississippi Regional Center, Oxford, MS (2008 – 2009)

Psychology Extern

Duties include working with adults with developmental and intellectual disabilities. Behavior analysis, performing assessments to determine intellectual ability and adaptive functioning, developing psychology programs to address behavior concerns, and writing annual reports and programs.

Supervisor: Dr. Kimberly Sallis, Ph.D. – Director of Psychology

Desoto County School District, Desoto, MS (2007 – 2008)

Behavior Specialist

Duties include working with teachers, administrators, parents, and children ranging in age from preschool to high school. Performing functional behavior assessments and behavior consultations for students with behavior difficulties, as well as develop and help implement behavior plans in the classroom.

Supervisor: Dr. Sheila Williamson, Ph.D.

Developmental Disabilities Clinic, Auburn, AL (2005 – 2006)

Undergraduate Behavior Specialist

Duties include providing home based intervention to children diagnosed with Autism and other developmental disabilities using ABA techniques.

Supervisor: Dr. James McCoy, Ph.D. - Director

Rape Counselors of East Alabama, Auburn, AL (2004 – 2006)

Rape Counselor

Duties include working on a rotating basis as an on-call rape counselor for the hospital emergency room, as well as respond to and make community referrals.

Supervisor: Vicki Dearing – Director

OTHER PROFESSIONAL EXPERIENCE:**Assistant to the Clinical Training Program**, University of Mississippi (2009 – 2012)

Duties include communicating with graduate applicants, coordinating applications, and planning and organizing annual interview weekend for potential graduate students.

Supervisor: Dr. Alan Gross, Ph.D.

Graduate Teaching Assistant, University of Mississippi (2012 – 2013)

Undergraduate Statistics

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RESEARCH EXPERIENCE:**Graduate Research Assistant**, University of Mississippi (2006 – 2007)

Duties include assisting with data collection and peer consultation for research design.

Supervisor: Dr. Alan Gross, Ph.D.

Paid Research Position, Auburn University (2005 – 2006)

Supervisor: Dr. Elizabeth Brestan, Ph.D.

Undergraduate Research Assistant, Auburn University (2004 – 2006)

Warm-up Project

Duties include transcribing and coding videotaped parent-child interactions to determine if a warm-up is needed.

Supervisor: Dr. Elizabeth Brestan, Ph.D.

Undergraduate Research Assistant, Auburn University (2004 – 2006)

Duties include using Dyadic Parent-Child Interaction Coding System II (DPICS) to code video-taped parent-child interactions taken at the Child Advocacy Center.

Supervisor: Dr. Elizabeth Brestan, Ph.D.

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